

NOVEL HUMAN TRANSPORTER PROTEINS AND
POLYNUCLEOTIDES ENCODING THE SAME



5 The present application claims the benefit of U.S.
Provisional Application Number 60/163,018 which was filed on
November 2, 1999 and is herein incorporated by reference in its
entirety.

1. INTRODUCTION

10 The present invention relates to the discovery,
identification, and characterization of novel human
polynucleotides encoding proteins that share sequence similarity
with mammalian transporter proteins. The invention encompasses
the described polynucleotides, host cell expression systems, the
15 encoded proteins, fusion proteins, polypeptides and peptides,
antibodies to the encoded proteins and peptides, and genetically
engineered animals that either lack or over express the disclosed
genes, antagonists and agonists of the proteins, and other
compounds that modulate the expression or activity of the proteins
20 encoded by the disclosed genes that can be used for diagnosis,
drug screening, clinical trial monitoring, the treatment of
diseases and disorders, or otherwise contributing to the quality
of life.

2. BACKGROUND OF THE INVENTION

25 Transporter proteins are integral membrane proteins that
mediate or facilitate the passage of materials across the lipid
bilayer. Given that the transport of materials across the
membrane can play an important physiological role, transporter
proteins are good drug targets. Additionally, one of the
30 mechanisms of drug resistance involves diseased cells using
cellular transporter systems to export chemotherapeutic agents
from the cell. Such mechanisms are particularly relevant to cells
manifesting resistance to a multiplicity of drugs.